

**REMARKS**

Applicants respectfully request reconsideration. Claims 1-2, 4-11, 13, 15, 17-19, 22, 28, 30-31, 34-37, 81-82, and 93-97 were pending in the application. Claims 1 and 81 have been amended. Claims 1, 2, 4-11, 13, 15, 17-19, 22, 28, 30-31, 34-37, 81-82, and 93-97 are now pending in this application with claims 1 and 81 being independent claims. No new matter has been added.

**Amendments to the Specification**

Applicants have amended the “Related Applications” paragraph to reflect that the present application is a U.S. National Application of International Application No.: PCT/US2005/003514.

Applicants have added a paragraph to the specification to reflect Government support in satisfaction of 35 U.S.C. § 202(c)(6) and 37 C.F.R. § 401.14.

**Rejections Under 35 U.S.C. §112, Second Paragraph**

Claims 1-2, 4-11, 13, 15, 17-19, 22, 28, 30-31, 34-37, 81-82, and 93-97 have been rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicants note that what is required under 35 U.S.C. §112, second paragraph, is that those skilled in the art understand what is being claimed, when the claims are read in light of the specification (MPEP §2173.02). Orthokinetics v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1 USPQ 2d 1081 (Fed. Cir. 1986). In the present case, the plain meaning of the rejected claims is believed to be perfectly understandable to those of ordinary skill in the art. Thus, Applicants believe that the claims are definite under 35 U.S.C. §112, second paragraph.

Claims 1 and 81 have been rejected under 35 U.S.C. §112, second paragraph as being incomplete for omitting essential steps, such as omission amount to a gap between the steps. Specifically, the Office Action states that it is unclear how the fluids would be capable of leaving the vessel if the vessel is sealed. Without conceding to the correctness of the rejection, Applicants have amended claims 1 and 81 to include the step of “unsealing the vessel”.

Accordingly, Applicants respectfully request withdrawal of the claim rejections on these grounds.

Rejections Under 35 U.S.C. §102

Claim 81 has been rejected under 35 U.S.C. §102(b) as being anticipated by Miethe et al., U.S. Patent No. 6,488,894 (hereinafter, “Miethe”).

Claim 81 has been amended to recite that the vessel and the reaction site are formed in a microfluidic chip. Miethe fails to teach this claim limitation. Applicants also note that this amendment is based on the limitation of claim 93, which does not stand rejected on this ground.

Since Miethe fails to teach each claim limitation, claim 81 is patentable in view of Miethe.

Accordingly, Applicants respectfully request withdrawal of the claim rejection on this ground.

Rejections Under 35 U.S.C. §103

Claim 82 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Miethe.

As noted above, independent claim 81, from which claim 82 depends, recites limitations not taught by Miethe. Furthermore, the missing limitations in Miethe are not obvious in view of Miethe. Therefore, independent claim 81, and the claims that depend therefrom, are patentable over Miethe.

Accordingly, Applicants respectfully request withdrawal of the claim rejection on this ground.

Double Patenting Rejection

Claims 1, 2, 7, 8, 11, 13, 35-37, and 81-94 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 45-46, 48, 51-53, 72-102 of co-pending Application No. 10/584,819 (hereinafter, “Sia”).

Without conceding to the correctness of this rejection, Applicants are filing a Terminal Disclaimer to address the rejection.

Accordingly, Applicants respectfully request withdrawal of the claim rejections on this ground.

New Claim

New claim 98 has been added and is supported throughout the application as filed. Specifically, new claim 98 mirrors the language of claim 81, except it recites the vessel and the reaction site being integrally connected to one another, instead of being formed in a microfluidic chip. As defined on page 7, lines 18-23 of the present application, “integrally connected,” when referring to two or more objects, means objects that do not become separated from each other during the course of normal use, e.g., cannot be separated manually; separation requires at least the use of tools, and/or by causing damage to at least one of the components, for example, by breaking, peeling, etc. (separating components fastened together via adhesives, tools, etc.). Miethe does not teach that the vessel and reaction site are integrally connected as defined in the specification of the present application. By contrast, Miethe appears to teach a vessel and a reaction chamber that are formed as separate units. For example, at least Figures 2-4 show the vessel as a separate unit from the reaction vessel. Furthermore, Miethe teaches that the outlet channel of the vessel terminates in an outlet pipe ending above a reaction chamber (column 4, lines 43-45). These teachings in Miethe suggest that the outlet of the vessel is designed to be inserted into an inlet of a reaction site, and that the vessel and reaction site are not integrally connected to one another as claimed. Accordingly, Applicants believe that new claim 98 is patentable in view of Miethe.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 23/2825 under Docket No. H0498.70219US02 from which the undersigned is authorized to draw.

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Respectfully submitted,

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